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COMPUTERNEWS

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Cover

This month's cover photograph by Mark Tapia shows Operations Supervisor Dave Wong with floorplans for the 3033 model N8 installation. See this month's cover story for details of the major hardware change.

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Once again UTCS anticipates an eventful summer - plans are being implemented for a major change in the IBM consolidated machine room. Financial and operational considerations dictate this changeover. The decisions effecting the arrival at UTCS this June of twin 3033 model N8s, replacing the current configuration of 3031 and 3033 and 165, evolved from several immediate concerns:

1. UTCS operates within the constraints of inflation and has been asked to take an $87,000 cut for the 80/81 budget year. No inflation allowance was available for the 78/79 or 79/80 budget years though an addback allowance was eventually made in the 80/81 budget to cover some of the inflationary price increases.
2. In order to meet the budget cut with minimal effect on user services, UTCS chose to terminate the usage of the 165 with its ever increasing maintenance costs and to transfer APL and ATS services to the 3033.
3. As a result of the elimination of the 165 the computing capacity of the academic 3033 would have been under exceeding pressure. In future, it would have been extremely difficult to run everything on this processor.
4. Administrative growth has been projected at 20% per year. (There has been consistent growth over the past four years.) The effective computing capacity of the present administrative 3031 will be exceeded in April 1981.
5. A constant and careful monitoring of the marketplace by UTCS has determined that the most profitable time to sell the present 3031, the 3033 and the 165 is *now*.
6. Planned changes in the type and nature of UTCS services require resources. VIVA and the continuing development of a distributed computing network within the university are a priority.

Clearly the top priority for UTCS became the reduction of costs. It was obvious that the proposed reduction in budgetary resources would mean a significant cut in major services. With user well-being in mind, UTCS chose one solution as a way of meeting the budget cut: to eliminate the model 165 and to transfer services to the existing 3033. This would not be simple. We would require speeded-up installation of APL on an MVS system, as has recently been made available from I.P. Sharp, and a reasonable user-acceptable substitute for ATS, like ATMS.

However, future projections reminded us that services would be expanded and stretched and the capacity of the 3033 would be exceeded by April 1982. To accommodate this, a comprehensive proposal was made by UTCS to Simcoe Hall and was accepted: that of selling the 3031 for a profit (it having no long-term value as an investment) and of leasing a 3033 model N8 to replace it. This effectively fills the gap created by the loss of model 165's computing capacity and effects an immediate increase in relative processor capacity for administrative purposes.

This new configuration, under different leasing terms, is significantly less expensive than the current one for which the University of Toronto is budgeted. In this way, UTCS brings down annual expenses and recoups close to a million dollars over the next three years if no changes in configuration or financial arrangements are made.

However, the story does not end here. Further UTCS investigation revealed that

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the concurrent replacement of the academic 3033 with a *second,* leased 3033 model N8 would result in minimal loss in computing power but also in the generation of an immediate cash profit in excess of $300,000 presupposing the timely sale of the existing 3033. This $300,000 should be directed towards development of distributed processing, an area in which user requirements are increasing much faster than in mainframe services. With the N model, IBM improved the price/performance ratio. They chose to do so by artificially reducing the power of the 3033 by 25% but at the same time reducing its cost by 30% to 40%. Accordingly, although total CPU power would be reduced by 12%, the dual system would:

- reduce operational complexity by distributing the large number of services (10) over two systems
- increase operational flexibility and reduce software maintenance costs
- permit effective load sharing as demand for services changes
- provide back-up capability for all critical services, both administrative and academic
- free approximately $300,000 for the development of distributed processing within the university

The Presidential Advisory Committee on Computing Facilities and Services (PACCFS) voted to accept the proposal for twin N8s. This was the least expensive workable alternative, the other being a 3033 model N8 plus the existing 3033. Though the latter configuration would upgrade effective computing capacity, a drop in power on the mainframe side was approved in that this freed capital for the establishment of a development fund. Today we are happy to report that we have successfully sold the current 3031, the 3033 and the 165 for a good price, exceeding our initial expectations.

The new configuration of twin N8s will benefit administrative users in the short term - the effect of the budget cut will be minimal - and in the long term - growth potential will be ensured. With the termination of the 165, ATMS, the ATS alternative, and the new Sharp APL will be running on the same computer system with the administrative applications.

In merging the two 3033 model N8s into a single system image to achieve the above operational advantages, the programmers' first priority will be security. Student Record Services and Business Information Systems will play high profile roles in ensuring that the administrative databases are secure. UTCS is committed to making certain that there will be no added exposure to sensitive data. Further implementations to that end are anticipated within six months to a year.

UTCS believes it can operate successfully with the dual 3033 model N8s until the beginning of budget year 1983. By that time we hope to establish an effective network of distributed computers on campus that will take over some of the load of the main computing facilities and will undoubtedly create a new set of requirements substantially changing the role of the mainframe facilities.

Once again UTCS staff is engaged in planning for the changeover. Minimal disruption to user services is our prime consideration. We hope that there will only be two weekends in June in which service will not be available. More details will be published in the near future.

Dr. Doron J. Cohen

ATMS PROGRESS REPORT

As announced in this issue's cover story, UTCS moves to a twin 3033 model N8 configuration in June. This hardware change will impact the timing of the proposed upgrade from ATS to ATMS. With UTCS assistance, current ATS users will be moved to ATMS effective August, 1980. Before this date an ATMS system to replace all existing ATS functions will be operational. Training, documentation and file conversion will be completed as well.

The upgrade to ATMS should be relatively transparent for ATS users. This is due to the fact that the systems are upwards compatible, i.e., the extra functions of ATMS need not be initially exploited by former ATS users.

Since ATMS will run on the Administrative computer, initially facilities will be available only via existing ATS dial-in services and Administrative terminals having access to that processor.

All users of ATS will be contacted over the next several weeks to determine their plans concerning the ATS to ATMS upgrade.

Full ATMS functions will be implemented during the months following the June hardware change. It is hoped that by the end of the calendar year 1980, a fully enhanced ATMS service will be operational. The precise implementation schedule will be confirmed later in the summer, pending the delivery of hardware.

Dr. Frank Spitzer

USERS' COMMITTEE

There has been a recent reorganization of the reporting structure of the Advisory Committees to Professor H.C. Eastman, Vice-President of Research and Planning. UTCS operates under the responsibility of Professor Eastman. The restructuring comprises a formal creation of two committees to advise Professor Eastman on matters pertaining to computers: the Presidential Advisory Committee on Computing Facilities and Services (PACCFS) and a Users' Committee in the process of definition.

Professor H.W. (Hal) Smith, Electrical Engineering, is the Chairman of PACCFS. Professor Eva Swenson, formerly with the Department of Computer Science, is the Secretary in her role as Co-ordinator of University Information Systems. PACCFS is comprised of appointed members from various areas of the University and also the University's Financial Director, the Director of University Planning and Analysis and the Directors of Business Information Systems (BIS), Student Record Services (SRS) and UTCS *ex officio.* The general objectives and policies of University computing are the objectives of PACCFS.

The second Committee - the Users' Committee - whose terms of reference (reproduced below) have been adopted by Professor Eastman, has as its objective the representation of computing users to the senior University Administration and to UTCS. I shall serve as Secretary of this Committee in my role as the UTCS Faculty Liaison Officer, convening meetings and providing an information channel between the UTCS Management and the academic community.

Professor Eastman, in his role as Vice-President of the University, will be contact-

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USERS' COMMITTEE continued

ing all departments with a view to appointing members to the second Committee. Consequently, he will initiate the first meeting of this Users' Committee.

It is sincerely hoped that the impact of both the PACCFS and the Users' Committee will benefit user interaction with UTCS.

Frank Spitzer

TERMS OF REFERENCE

The role of the Committee shall be to provide a forum for discussion of the services provided by the University of Toronto Computing Services and the manner in which they meet the needs of users. The Committee may make advisory recommendations to the Director of the University of Toronto Computing Services about the services that are provided, but shall not be concerned with the internal administrative arrangements of the University of Toronto Computing Services, except to the extent that they directly affect the provision of service. Each member of the Committee shall serve as a representative of the division through which the Committee appointment was made.

The Director of the University of Toronto Computing Services shall bring to the Users' Committee, through the Chairman, proposals for changes in the University of Toronto Computing Services for the review, evaluation and advice of the Users' Committee.

The Users' Committee shall report annually, in writing, through its Chairman to the Vice-President (Research and Planning) and Registrar.

Composition

The Committee shall be composed as follows:

1. One representative of every department or office with a Computing Services budget (currently 90-series accounts);
2. One representative appointed by the principal, dean or director from any academic division, including the federated and constituent colleges, not otherwise represented on the Users' Committee;
3. Extra members appointed by the Vice-President on the recommendation of the Chairman;
4. A Chairman of the Committee, not normally a member of the University of Toronto Computing Services staff, elected for a two-year term by the Committee from amongst its members; the Committee Chairman shall *ex officio* be a member of the Presidential Advisory Committee on Computing Facilities and Services;
5. A Secretary of the Committee, responsible for the administrative support of the Committee's deliberations, who shall normally be the Faculty Liaison Officer of the University of Toronto Computing Services;
6. The Co-ordinator of University Information Systems *(ex officio);*
7. The Director of the University of Toronto Computing Services *(ex officio).*

Procedure

The Committee shall meet once a month, but may meet more frequently as deemed necessary by the Committee's Chairman.

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TERMS OF REFERENCE continued

The Chairman of the Users' Committee shall be responsible for setting the agenda of the meetings of the Committee.

The meetings shall be open, and non-members may speak with the prior permission of the Chairman.

Each regular meeting of the Users' Committee shall provide a question period at which members may raise questions about matters which are within the terms of reference of the Committee.

The Chairman shall have the right to create an executive committee, which shall include all *ex officio* members of the Users' Committee, to carry out the business of the Computer Users' Committee but is required to notify any decisions of this executive committee to the membership of the Users' Committee. If required, a vote of the whole committee shall be decisive.

The Secretary shall send agendas and supporting documents to all members of the Committee.

Minutes of the meetings shall be published by the Secretary.

A quorum shall be one-third of the total membership of the Committee.

All recommendations by the Committee shall be endorsed by a quorum.

Academic/Administrative

DEPARTMENTS, SCHOOLS, FACULTIES

Academic Statistics, Office of
Admissions, Department of
Aerospace Studies, Institute for
Alumni Affairs, Department of
Anthropology, Department of
Applied Science and Engineering, Faculty of
Architecture, School of
Arts and Science, Faculty of
Astronomy, Department of
Behavioral Science, Department of
Botany, Department of
Business Information Systems
Career Counselling and Placement Centre
Chemical Engineering, Department of
Chemistry, Department of
Civil Engineering, Department of
Comptroller, Office of the
Computer Science, Department of
Continuing Studies, School of
Criminology, Centre for
Dentistry, Faculty of
Education, Faculty of
Electrical Engineering
Engineering Science, Division of
Erindale College
Forestry, Faculty of
French, Department of
Geography, Department of
Geology, Department of
German, Department of
Graduate Studies, School of
History and Philosophy of Science and Technology, Institute for
History, Department of
Housing Service
Industrial Engineering, Department of
Innis College
Italian Studies, Department of
Law, Faculty of
Library Science
Linguistics, Department of
Management Studies, Faculty of
Mathematics, Department of
Mechanical Engineering, Department of
Medicine, Faculty of
Metallurgy and Materials Science, Department of
Music, Faculty of
Music, Royal Conservatory of
New College
Nursing, Faculty of
Nutrition and Food Science, Department of
Personnel Department
Pharmacy, Faculty of
Physics, Department of
Physical and Health Education, School of
Physical Plant Department

continued...

TERMS OF REFERENCE continued

Political Economy, Department of
Psychology, Department of
Radiology, Department of
Rehabilitation Medicine,
 Department of
Religious Studies (Graduate)
 Centre for
Religious Studies (Undergraduate)
 Department of
Research Administration
Scarborough College
Social Work, Faculty of
Sociology, Department of
St. Michael's College
Statistics, Department of
Student Record Services
Trinity College
University College
Urban and Community Studies
Urban Regional Planning,
 Department of
Vice-President and Provost
Vice-President (Research and
 Planning) and Registrar
Vice-President, Campus and
 Community Affairs
Victoria University
Woodsworth College
Zoology, Department of

MVS SHARP APL

UTCS will implement a major upgrade to its APL service in August, 1980, and will consequently offer a stronger, state-of-the-art MVS Sharp APL service.

Some reasons for the change are:

1. to give users the benefits of the expanded features of the new release;
2. to achieve compatibility with current standards established by the IP Sharp Associates (IPSA) installation;
3. to allow APL to run under MVS on a 3033. Sharp APL at U of T is currently running under MVT on the S/370-165-II.

The introduction of the new APL will have three phases. They are outlined below.

Phase 1 will provide an APL service that has a high degree of compatibility with the present system. This phase will be completed when the new release goes into production in early August. Our intention during this phase is merely to provide a replacement facility for current APL applications.

During Phase 2 we will release documentation and teach courses on both new features and expanded capabilities of the new release. This will allow users to make fuller, more efficient use of the new APL.

Phase 3 will be the removal of antiquated APL conventions and the standardization of at least some coding techniques. This will remove some outdated features from the system and enhance the readability, as well as improving ease of maintenance of APL systems.

There will also be an emphasis on teaching users to get the best performance from the new APL system.

Phase 1 is proceeding well to-date. The new system is at the university and is being run as a test system for selected internal staff. We are able to transfer files and workspaces from the present system to the test system and they continue to run as always.

With the assistance of a representative user group, UTCS will be running a user test during the month of May. The users within this group will test their present applications on the new system. With the feedback we receive from these users, we hope to make any necessary conversion as

continued...

MVS SHARP APL continued

painless as possible to the user community.

We anticipate that the new APL will yield considerable gains for the user, both in efficiency and greater flexibility.

If you have any questions, or feel that the conversion may cause any problems for you, please do not hesitate to call your CSR.

Eric Haberfellner

COMPUTER COMMUNICATIONS - PACX INSTALLATION

The hardware for Private Automatic Computer eXchange (PACX) arrived in the week of April 28 and the connection of terminal lines and computer ports began shortly thereafter. PACX is a front end switch that allows a terminal to be connected to any of the attached computer ports. Eventually, all asynchronous terminals (Diablos, DECwriters, VT-100s etc.) wanting to access UTCS hosts will connect through PACX. (See *COMPUTERNEWS # 177* for more detail.)

The initial PACX will be a double PACX-III, having a capacity of 508 terminal lines and 252 computer ports. The initial UTCS configuration will attach about 100 terminals and 70 computer ports, split 30-20-20 between the 165, 3033 and DEC-10 respectively. On these machines, the ports will be divided into three speed ranges - low speed (300 bps or less), medium (1200 bps) or high (4800 bps). The maximum asynchronous data rate through PACX is 9600 bps. At present the highest speed available is 4800 bps. This is due to a current hardware limitation of the IBM 3705 front ends and will be increased to 9600 bps when the necessary hardware is obtained. The ports will be allocated to active users on a first-come, first-serve basis. If the user finds that all ports in his selected service class are busy, a queuing feature will allow the user to camp-on until a port becomes available.

The initial configuration will be phased in during May, beginning with UTCS staff. After the initial testing period, the terminals in local UTCS-controlled user areas (Engineering Annex, Sidney Smith and New Physics) will be connected. During this time, other users who have dedicated lines to the McLennan Labs computer centre can also be connected through PACX. Users coming in through the low speed dial-in ports will not be affected initially. The low speed dial-in modems to the interactive services will not be attached until the PACX-IV upgrade arrives sometime in mid-October. The low speed modem cutover date may change because of changes in the arrival date. The 1200 bps, 212A modems, however, will be attached to share this dial-in service with the DEC-10. Currently, only the 165 and 3033 have 212A service at 978-5137 and 978-3959. Users, of course, must have a compatible 212A modem at their location to use this service.

Terminals that will be connected through the PACX will have to go through a machine and speed selection phase before they are connected. The procedure is described below.

PACX User Procedure For Hardwired Terminals Only

1. (N.B. For dial-up terminals there is **no** change in logon procedure.) Switch on dataset, modem or line driver and terminal. With some terminals, if already on, depressing the BREAK key for 1 second or longer will connect the terminal to PACX. Wait for an indication that the terminal is ready.
2. For all ASCII terminals, type <CR>. PACX response will be *.

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PACX INSTALLATION continued

For 2741s or 3767s, type '.'.

PACX does not provide a response.

3. Type the **2-digit** service code associated with the desired service followed by <CR>:

   DD <CR>

   The digit service codes are in the table following this procedure. Do not delay in this step. If you take longer than 20 seconds, you will be disconnected. If this should occur, switch off, wait a few seconds and return to step 1.

4. PACX will respond with one of the following messages:

a. "SERVICE DD START"
You are now connected and may proceed.

b. "SERVICE DD UNAVAILABLE"
The service is not currently available.
Switch off and call operations to find
out the status of the service.

c. "SERVICE DD?"
You have requested an invalid service.
Switch off, wait a few seconds, and go
to step 1.

d. "SERVICE DD Q#n"
All ports providing service DD
are busy. You are queued and there
are currently n users ahead of you.
You have the option of waiting or
disconnecting. If you wait, you will
be prompted by the message
"SERVICE DD START" when your line
is connected.

e. "SERVICE DD Q FULL"
The queue is full and you have
been disconnected. In this case,
wait several minutes before
trying the requested service.

f. "SERVICE DD ILLEGAL"
You have typed invalid characters
for a service class and you have
been disconnected. Check the
digits of the desired service class
and try again from step 1.

SERVICE CODES

Machine	<300 bps	1200 bps	4800 bps
DEC-10	10	11	12
165	20	21	22
3033	30	31	32

Potential user problems may arise if the user terminal speed does not match the selected service class speed. In this case, PACX is quite happy to make the connection and not warn the user, although PACX has the information to know that a speed mismatch has occurred. No warning is given to the user, and, of course, the connection is unusable.

There may be other, unforeseen, operational difficulties in connecting through PACX. If a user has any persistent difficulties with a connection, he is encourage to call operations at 978-7393 for assistance and trouble reporting. Any difficulties will investigated immediately.

With the PACX in place, UTCS will have a more manageable environment for providing improved asynchronous service. The port monitoring facilities will provide accurate port utilization statistics, permitting a more effective deployment of front end resources to services. More users will be able to connect with higher speed lines to a wider selection of applications. To take full advantage of the increased speed, the user should obtain a dedicated communications link to the PACX, as discussed in the last two issues of *COMPUTERNEWS.* A brief discussion with your Computing Services Representative will examine the feasibility of this from your location.

Future columns will describe other services available through PACX and changes in its

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PACX INSTALLATION continued

configuration. During the summer months, the asynchronous ports to the IBM services will be merged into one 3705. In parallel, new software to be installed on the 3705 will simplify access to the IBM asynchronous services.

Walter Rosocha

MANAGEMENT OF FUNDS FOR UTCS SERVICES

Many new users, unfamiliar with UTCS accounting practices, have encountered both delays in establishing accounts and inconvenience caused by the locking (deactivation) of Service Access Codes (SACs).

The following, brief commentary aims to clarify the procedures of UTCS Accounting Services so as to effect increased efficiency and user satisfaction.

Each university department (or research grant) is budgeted a set amount of funds for computing in a given fiscal year. These computing funds are held in the departmental Appropriation Account and are earmarked by UTCS with a special code (i.e., 1-NNN-NNN-90). Next, this designated amount is divided *within* the department among various users (or groups): each user (or group) receives a Blanket Purchase Order Account (BPOA) from UTCS. Costs encumbered under BPOAs are paid monthly to UTCS. Though this first-step in funding does not originate from UTCS, the information is part of a user's account profile.

Raising a Blanket Purchase Order

Administrative/teaching staff make application for computing funds to their departmental representative for computing. Names of these representatives are available from UTCS Accounting Services, specifically from a UTCS Computing Services Representative (CSR). (Researchers obtain funds from a granting agency via U. of T.'s Office of Trust and Research.) If funds are granted, the potential user completes a **Purchase Requisition**, to be signed by the department head. This Purchase Requisition is sent to the Comptroller's Office, Purchasing Department at 215 Huron Street. (It is a white copy.) Please note that if *immediate* access to the system is required, send a photocopy of this Purchase Requisition to UTCS Accounting Services.

To avoid delay, be sure the Purchase Requisition includes the following:

- **Blanket Purchase Order for Computer Usage**
- amount in dollars
- expiry date (usually the end of the fiscal or grant year or the Grant Expiry Date)
- NEW ACCOUNT, or BPOA# if there is a past account
- name of Holder/Administrator of account

If the dollar amount shown on the Blanket Purchase Order is ever depleted, an account holder may apply for an increase. Raising a new Blanket Purchase Order is not necessary unless the additional funding comes from a different source in the department's budget.

Establishing a Computer Account

On receipt of a Blanket Purchase Order from a potential user, UTCS sets up his new **Blanket Purchase Order Account (BPOA).** It is a four-digit number. All costs incurred by the user will be charged to this account.

As an example, a user involved in a

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MANAGEMENT OF FUNDS continued

research project has one BPOA. It can be funded by a number of Blanket Purchase Orders, encumbering funds from different sources:

3-NNN-NNN-20 PO# B012345	$1000.
3-NNN-NNN-16 PO# B001234	$2000.
1-NNN-NNN-98 PO# B101234	$3000.
BPOA #4023 Total allocation	$6000.

In the above example, the user can spend $1000. on a private grant, $2000. on a Large User grant subsidy and $3000. on a departmental research subsidy. If he was to need additional computing services (for teaching or administrative purposes), a separate BPOA would have to be established. This new BPOA would be funded by a Blanket Purchase Order's withdrawal of money from a departmental Appropriation Account (i.e., 1-NNN-NNN-90) designated for this purpose.

Budgeting Within Projects

Further, if budgeting/accounting is required *within* the BPOA, **Customer Activity Numbers (CANs)** can be set up by UTCS. This allows individuals or groups within a department to pay for computing from the same source but to keep separate records, spending limits or cost breakdowns.

Consider the above example - the research user with a $6000 allocation of funds. There are people working for him on four different sub-projects. He wants to place an automatic control on the amount spent by each sub-project. (I.e., he chooses to allocate $1000 to each sub-project (total $4000) reserving the remaining $2000 for future user.) Therefore...

BPOA # 4023:

Total Allocation	$6000. (True Balance)
Allocation to CANs	$4000. (Balance)
Reserve	$2000. (Current Balance)

CAN 0123	$1000.
CAN 0124	$1000.
CAN 0125	$1000.
CAN 0126	$1000.

The chief researcher can at any time request UTCS Accounting Services to raise the spending limit of a CAN. Technically, every BPOA has at least one CAN. If there are no additional CANs, the one existing CAN has the spending limit of the BPOA.

Incidentally, if even *one* of a group of CANs under a BPOA has overdraft privileges (i.e., no spending limit), spending control at the BPOA level dissolves. Repercussions of overspending are obvious and it is an unrecommended practice.

Control of Spending on Service Access Codes (SACs)

A spending limit on the CAN may further be controlled at the **Service Access Codes (SAC)** level. This SAC, in conjunction with a password, authorizes the user to access the system. However, if no dollar limit has been specified for the SACs, charges will be checked and will accrue only to the total set for the CAN (unlike the procedure for "overdrawn" CANs in which the BPOA limit could be exceeded).

Please note that certain services (see USERBOOK Section 2) such as Tape/Disk Rental and Online Storage are charged directly to the CAN. Accordingly, the CAN holder should accommodate these additional charges when setting SAC limits.

Account Balances and Their Implications

When a BPOA is established, the total allocation from the Blanket Purchase Order(s) is the account's *True Balance.* If funds are ever depleted, a letter informs the BPOA holder: an increase must be made to the Blanket Purchase Order(s) or computing is

continued...

MANAGEMENT OF FUNDS continued

suspended. Accrued usage is reflected daily in the *True Balance.*

Similarly, accrued usage is reflected daily in the CAN(s) associated with the BPOA and is called the *Balance.* When a CAN Balance has been depleted, the CAN holder also is informed by letter: unless a further allocation is made, UTCS suspends access to services (after a 10-day grace period) by deactivating (locking) SACs. At this point it is the responsibility of the BPOA holder to request an increase to the CAN, based on the amount in the BPOA's *Current Balance.* If no funds are reserved for this, the CAN may be increased by

- arranging for an increase on the Blanket Purchase Order to provide the BPOA with an additional allocation, or
- requesting a decrease in the allocation of one or more CANs within the same BPOA so that the released funds can be used to increase that CAN.

(Note that although a BPOA keeps track of dollar limits at the CAN level, a CAN does not keep track of dollar limits at the SAC level.)

This brief overview does not consider a number of irregularities arising in connection with certain types of user accounts not funded through the university. If you require further information, see Userbook Section 2 or contact your Computing Services Representative (CSR) or call 978-3960.

Merton Hunte/Marg Doherty

PUT CEASES OPERATION

The Physics Undergraduate Terminal (PUT) was in operation from October 15, 1979 until April 11, 1980. During that period it provided HSJS services to undergraduate students. The terminal consisted of 14 keypunches, an IBM 2501 card reader and an IBM 1403 printer. An adjacent area provided working space for about 10 students and a UTCS program advisor.

During its operation PUT handled over 75,000 student jobs. This represents about 13% of the jobs handled by PUT, EUT and ASUT combined. Considering that PUT was considerably smaller in size than either EUT or ASUT, and that PUT was open 65 hours per week compared with 124 hours for EUT and 90 hours for ASUT, it is evident that PUT was well used by students.

Many people contributed to the success of PUT. The Department of Physics, Professor R. L. Armstrong and Mr. J. Lewin in particular, contributed by allowing the second floor Physics lounge to be used as the site for PUT and by assisting in aspects relating to the installation of PUT. Physical Plant personnel capably transformed the lounge into a terminal area and installed necessary electrical cables. IBM on-site engineers installed and maintained the card reader and printer. UTCS Operations staff and program advisors kept PUT running smoothly and ably assisted students with computing problems. UTCS would like to extend thanks to all these people.

UTCS is currently developing plans for additional, more permanent HSJS facilities on the St. George campus. The finalized plans will hopefully be implemented over the summer resulting in increased HSJS facilities for the 1980 fall term.

Bob Chambers

COMMUNICATIONS & SMALL SYSTEMS NEWS

The Communications and Small Systems (CSS) lab, situated in the Sandford Fleming building, room 106, is a mini- and micro-computer-based service facility which is available to all departments of the university.

The prime concern of the lab is data acquisition and analysis in the area of digital signal processing, or the study of wave forms. Typically, any oscillation, not only that related to electronics or engineering, can produce waves. These waves can be collected by a computer and subsequently displayed in raw form (as a statistical representation) on a graphics terminal. In order to perform these functions, the lab incorporates various programming techniques which allow the user to manipulate his data at a desired instant in time. The user may therefore treat the computer as his own machine and receive responses when he is ready to view them. These features allow CSS to service other related areas of interest like tracing charts or pictures by hand while storing the information for subsequent analysis and also collecting real-life images via a small video camera for alter display.

Applications like these and others require the graphics and real-time capabilities of mini- and micro-computers. The CSS lab puts such capabilities into your hands.

Another CSS function, of general concern to the university, is its work with small computer systems designed for a user's office or lab environment. In short, CSS will sell or rent a mini-/micro-computer to a user and offer him hardware and software support. At present, these systems have been used for data acquisition, as described above. However, as more hardware and software packages become available in the marketplace, this *small-system* service will suit a wider range of applications and take on greater importance in the user community.

Phil Girouard

IS PIDGIN ENGLISH A COMPUTER LANGUAGE?

Traditionally, one associates the use of computers with maths and sciences. But the humanities also utilize computing. Consider the work of Doug Woods, a Professor in the Linguistics Department at Scarborough College. One of the courses taught by Professor Woods is LINC21Y (Structure of a Language), the aim of which is to allow advanced students of linguistics to apply theoretical knowledge to the practical problem of creating a language's grammar.

Each year Professor Woods chooses a language for study, in this case West African Pidgin English. To aid the students Professor Woods decided to use the volume *West African Pidgin English* by G.D. Schneider.

In order to analyse this language, Professor Woods entered the contents of the text on the IBM 3033 and subsequently created a concordance of it using a program provided by Professor Pierre Ducretet of the French Department, St. George Campus.

After the previous year's students entered the text via TSO, both inconsistencies in the text as well as errors created in inputting were discovered, all of which needed correction before running the concordance. This year, after learning TSO, Professor

continued...

PIDGIN ENGLISH continued

Woods' group of students performed the necessary 'cleaning up' as well as the insertion into the text of diacritics to be used by the concordance programs. This part of the project went smoothly especially considering that none of the students had ever worked with computers. Apart from a few initial problems, students learned TSO quickly and proceeded with minimal assistance.

In turn, the text was readied for input to the concordance program by Dave Rootham, an advisor at the Scarborough College Computer Centre. He inserted into the text special, required line numbers.

The concordance of the text was subsequently run with the desired results - Professor Woods and his students obtained the data needed for successful analysis of West African Pidgin English. The creation of a grammar would follow.

Bob Blackburn

CLASS C SUMMER SPECIALS

This summer, CLASS C users will be able to take advantage of our special summer CLASS C service. During the period June through September, CLASS C memory will be charged at half of the usual rate and the hours of service for the class will be significantly expanded.

For full details regarding the summer service changes for CLASS C, contact your Computing Services Representative.

Derry Cox

PASSAGES

This is the last issue of *COMPUTERNEWS* to be edited by Mrs. Janet Barr who has been integral in the development of the newsletter since 1974. Before her promotion to editor, Janet worked for several years at UTCS with both Operations and Services groups of S/370 Services. In the fall, after her maternity leave, Janet will continue with UTCS as a part-time consultant. Thank you, Janet, for your contribution not only to *COMPUTERNEWS* but to documentation services overall.

Paul Shindman is the new supervisor/editor of the Publications group. Paul has been the Computing Services Representative at Erindale College for the past year. In his role as a CSR, Paul has had many opportunities to view the use of UTCS documentation in the field. We welcome the perspective and experience that Paul brings to Publications.

Don Gibson

PERSONNEL CHANGES

This month congratulations go out to Paul Shindman who has been promoted to Information Supervisor in Publications from Computing Services Representative at Erindale College. Former editor Janet Barr will be working in Publications on a part-time basis.

Doug Thompson is leaving the Operations Department, effective April 25, 1980 to seek new employment. We wish him luck. Glenn Thompson will take over Doug's position.

Programmer Michael Wilde is with UTCS in Systems , effective April 1, 1980.

Theresa Veira

RECENT ACQUISITIONS IN THE DCS LIBRARY

Advances in computers.
v. 18 (1979)

American National Standards
Institute.
American national standard
programming language FORTRAN.
New York, A.N.S.I., 1978.

Boden, Margaret A.
Artificial intelligence and natural man.
New York, Basic Books, 1977.

Hume, J.N.P. and Holt, R.C.
Programming FORTRAN 77.
Reston, V., Reston Pub. Co., 1979.

International Conference on Software
Engineering, 4th, Munich, Sept. 1979.
Munich, Sept. 1979.
Proceedings.
New York, IEEE, 1979.

IBM Symposium on Mathematical
Foundations of Computer Science,
4th, Oiso Prince Hotel, Japan,
Nov. 1979.
Japan, Nov. 1979.
Parallel processing, structured
automata & languages.
Tokyo, IBM Japan, 1979.

International Conference on Very
Large Data Bases, 5th, Rio de
Janeiro, Oct. 1979.
Very large data bases.
New York, IEEE, 1979.

UTCS SYSTEMS

3033 PROCESSOR

- located in Mclennan Physical Laboratories
- provides General Purpose Job Stream, High Speed Job Stream, TSO, WYLBUR
- 6 megabytes of memory
- MVS with JES2

SYSTEM/370 MODEL 165-II

- located in McLennan Physical Laboratories
- provides APL and ATS services
- 4 megabytes of memory
- OS/MVT with APL and ATS

3031 PROCESSOR

- located in McLennan Physical Laboratories
- provides administrative IMS/VS DB/DC Batch and TSO services
- 6 megabytes of memory
- MVS with JES2

DECSYSTEM-10 Model 1090

- located in Sandford Fleming
- provides General Purpose Time-Sharing
- 256 K - 36 bit words of memory
- TOPS-10 operating system

COMMUNICATIONS & SMALL SYSTEMS (CSS)

- located in SF106
- DEC GT44 System with PDP-11/40 CPU
- 2 Z80 based microcomputers
- DEC GT40 System with PDP-11/05 CPU
- provides specialized graphics and inter- active graphics
- provides on-line and real-time computing services, data acquisition and minicomputer services

UTCS DIRECTORY

POSITION	ROOM	CENTREX PHONE NUMBER
Director		
Dr. Doron Cohen	MP350	8948
Associate Directors		
Rein Mikkor	MP350	5058
Al Heyworth	MP350	4936
Faculty Liaison Officer		
Dr. Frank Spitzer	MP350	4619
Manager, Communications & Small Systems		
Eugene Siciunas	MP350	4967
Manager, Operations		
Derry Cox	MP350	7092
Manager, Systems		
Ward Beattie	MP350	3579
Manager, Academic Computing Services		
Ralph Lombardi	MP350	7130
Manager, Administrative Computing Services		
Walter Berndl	MP350	7331
Manager, Services Support		
Don Gibson	MP350	5568
Administrative Officer		
Suzan Fawcett	MP350	4428
Information & Accounting Office		
General Inquiries	EA206	4990
Accounts		
Aggie Stevens (U of T)	EA206	8702
Sylvia May (External)	EA206	7148
Supervisor, Accounting & Information Services		
Marg Doherty	EA209	3960
Access Codes		
Michelle Mule EA206	8703	
Supervisor, Communication Systems		
Walter Rosocha	SF105	7087
Programming Services		
Bill Lauriston	SG201	6877

continued...

UTCS DIRECTORY continued

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Supervisor		
Vera Cabanus	MP368	5040
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Dale Wright	MP368	4565
Data Entry		
Zelda Anderson	HU405	5273
Keypunching		
Dale Wright	MP368	4565

Supervisor, Applications

Herb Kugel	SG304	7286

Computing Services Representatives

Engineering Annex Terminal		
Sue Chong	EA201	4357
Program Advisors	EA103	
Time-Sharing Support		
TS Advisors	SG204	6465
Mark Tapia	SG204	7109
Erindale		
		828-5311
Scarborough		
Bob Blackburn		284-3173
Arts and Science		
	SS2133	6509
New Physics		
Bob Chambers	MP1202	8823
External		
Ihor Prociuk	SG205	6875,6885

Supervisors, Operations

Paul Scarborough (IBM 3033-IBM 165)	MP335	6220
Krishna Patnaik (DEC-1090 & CSS)	SF106	4086
Dave Wong (IBM 3031)	MP335	6864

Key:

EA = Engineering Annex
SG = 49 St. George
HU = 215 Huron St.
MP = McLennan Physical Laboratories (New Physics)
SF = Sandford Fleming
SS = Sidney Smith

Job and System Status Queries

SYSTEM/3033,TSO	7373
ATS/APL	6234
2741 TERMINAL MALFUNCTIONS	7107

Time-Sharing Services	Dial-Up
APL,ATS	7200 Centrex 7201 Non Centrex
TSO,WYLBUR	6200 Centrex 6201 Non Centrex
DEC-10 Services	4224 Centrex 4244 Non Centrex
PHONE-IN ADVISING	6465

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